



Learning Project 9 Geometry – Angles & Triangles

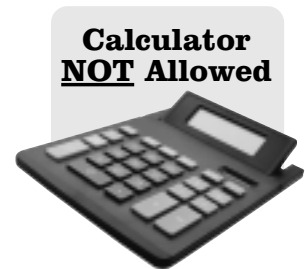
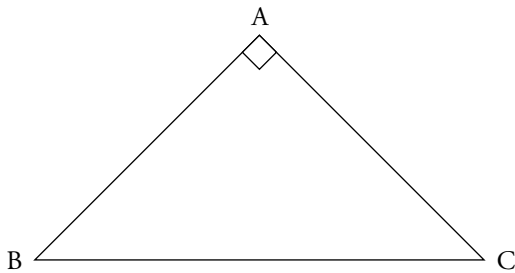
Inquiry Activity Geometry 9–1: Triangles

(Note: Italicized portions should be directed to students.)

1. Identifying the Problem (Item #17, PA) Calculator Not allowed.

Read the question carefully, as you would if taking the actual test.

17. For the right triangle shown in the diagram below, angle A measures 90° and sides AB and AC have the same length. What is the measure of angle C?



- 1) 30°
- 2) 45°
- 3) 60°
- 4) 90°
- 5) 135°

Here are some problem clarification questions you may want to consider when reading test questions.

What words and/or symbols might be important to understand to answer this problem and what are they telling you?

It is possible that learners would pick right triangle, diagram, angle, measures, same length, among others.

What words and/or symbols are unfamiliar and what do you think they mean?

Cannot know what words the learner will choose.

2. Becoming Familiar with the Problem

Ask yourself questions like these about the problem, taking note of the ones that were especially helpful so that you can remember to use them when you take the test.

Reread the question.

In your own words, what are you being asked to find?

Think about the knowledge you have of triangles and right triangles. How can you use that knowledge to help solve the problem?

3. Planning, Assigning and Performing Tasks

Try to answer the test question any way you can, even if you have to guess, but try to be aware of the reasoning and operations that you are using. The following questions can be helpful.

What might you guess the answer to this problem would be? Be prepared to explain the steps you used to guess at an answer.

Without any hints, learners will likely guess correctly on this one because many remember that the angles of a triangle add to 180° , and angle B looks equal to angle C in the diagram.

Estimate an answer

Try using the formulas page.

Eliminate some of the answer choices and explain why you eliminated them.

Might eliminate answers number 4 and 5 since both these answers would produce a triangle of more than 180° , since there is still one more angle, angle B, to consider.

Choose an answer and be ready to explain how you found your answer.

4. Sharing with Others

Telling other people what you know helps you to understand the material better. So take this opportunity not only to share your knowledge, but also to learn it more completely.

Small Groups: *Compare your answer to others in the group and explain how you found it. If you have trouble agreeing on one answer, be ready to explain the reasons behind your disagreement. Discuss test-taking strategies, including guessing.*

Explain any help you got from the formulas page.

Research how angles are measured, what a right triangle is, and the sum of angles in a triangle.

Whole class: *Report your group's answers, an explanation of how the formulas page can help, the research on how angles are measured, the definition of a right triangle, the right angle symbol and the sum of angles in a triangle.*

Take notes on any different ways that others used to find the answer.

5. Reflecting, Extending and Evaluating

Reflect: *Think about what you learned.* (A group activity or instructor lead.)

Here are some questions to start you thinking about the experience you just had. Thinking about what you have learned and experienced is part of the learning process. When the focus is only on the answer, you don't get much time to think about what was learned)

Review all the different ways that were presented to find the answer to this problem and determine the most efficient method to solve the problem.

How do you intend to use the formula page provided on the GED in studying for the GED?

How do you intend to use the formula page provided on the GED while taking the GED?

Your instructor will provide paper for this exploration. Take the paper and fold it, and cut various triangles. Then use a protractor to measure the base angles.

The fold is the altitude of the triangle and will make the two sides equal. Learners will see specifically that the base angles of an isosceles triangle are equal.



Extending: Extend what you learned to new situations

In extending, you are being asked to transfer the information presented in the Practice Test question to other information or situations you already know and maybe making new connections to other information.

Discuss situations in your lives in which you might use your knowledge of a triangle with equal sides and a 90° angle might be useful.

Discuss situations in your lives in which you might use the knowledge that all the angles of a triangle equal 180° .

Evaluating: Assess what you learned and how you learned it

In this last step, you get a chance to review the content of what you learned and the methods used to learn. There are no right or wrong answers to these questions; it is your chance to look more closely at your learning style and the opportunity to state how you benefited or didn't benefit from the content and/or the methods to help you pass the GED test.

In the Extending portion of Step 5, we ask you to extend the problem you just explored.

In extending, you are being asked to transfer the information presented in the Practice Test question to other information or situations you already know and maybe making new connections to other information.

How helpful do you think this step is in preparing to take the GED? Explain.

How helpful do you think this step is in becoming more confident in math?

How helpful do you think this step is in overcoming math anxiety?

Ask for practice exercises in any of the areas covered in this Inquiry Activity if you think you need them.